

CLAIMS:

1. A method comprising:
converting a first digital signal from a linear domain to a logarithmic domain,
adding the converted digital signal and a second digital signal to generate a
scaled digital signal; and
converting the scaled digital signal from the logarithmic domain to the linear
domain.
2. The method of claim 1, wherein the first digital signal is a baseband signal and
the second digital signal is a gain value.
3. The method of claim 1, wherein the first digital signal is a first baseband signal
and the second digital signal is a second baseband signal, the method further comprising
converting the second digital signal from a linear domain to a logarithmic domain prior
to adding the converted digital signal and the second digital signal.
4. The method of claim 1, further comprising processing the scaled digital signal in
the linear domain.
5. The method of claim 1, further comprising converting the first digital signal
from the linear domain to the logarithmic domain by accessing a lookup table.
6. The method of claim 1, further comprising converting the scaled digital signal
from the logarithmic domain to the linear domain by accessing a lookup table.
7. The method of claim 1, further comprising saturating the scaled digital signal
prior to converting the scaled digital signal from the logarithmic domain to the linear
domain.
8. The method of claim 1, further comprising truncating the scaled digital signal
prior to converting the scaled digital signal from the logarithmic domain to the linear
domain.

9. The method of claim 2, wherein the scaled digital signal is an attenuated signal having a value less than the baseband signal.
10. The method of claim 2, wherein the scaled digital signal is an amplified signal having a value greater than the baseband signal.
11. A method comprising:
 - converting a baseband signal from a linear domain to a logarithmic domain;
 - adding the converted baseband signal to a gain to generate a scaled baseband signal;
 - saturating the scaled baseband signal;
 - converting the saturated baseband signal from the logarithmic domain to the linear domain; and
 - processing the saturated baseband signal in the linear domain.